

**AMENDMENTS TO THE CLAIMS:**

1. (Currently amended) A storage medium, comprising:

a metallic underlayer;

a ferroelectric data layer over said metallic underlayer; and

a layer over said ferroelectric data layer directly contacting a top surface of said ferroelectric data layer, said layer over said ferroelectric data layer comprising silicon and having a charge migration rate faster than a charge migration rate of said ferroelectric data layer, said charge migration time being less than  $10^{-10}$  second.

2-5. (Canceled)

6. (Currently amended) The storage medium of claim 2 1, wherein a thickness of said conducting layer is within a range of approximately 5 Å to approximately 25 Å.

7. (Original) The storage medium of claim 1, wherein said metallic underlayer comprises  $\text{SrRuO}_3$ .

8. (Original) The storage medium of claim 1, wherein said ferroelectric data layer comprises at least one of:

PZT ( $\text{Pb}(\text{Zr}_x \text{Ti}_{1-x})\text{O}_3$ );

SBT ( $\text{SrBi}_2\text{Ta}_2\text{O}_9$ );

$\text{BaMgF}_4$ ;

STN ( $\text{Sr}_2(\text{Ta}_{1-x}\text{Nb}_x)_2\text{O}_7$ ); and

NFM (COVA).

9. (Currently amended) The storage medium of claim ~~5~~ 1, wherein a thickness of said conducting layer is approximately 15 Å.

10. (Withdrawn) A memory apparatus, comprising

a support mechanism to support and move a ferroelectric storage medium, said ferroelectric storage medium comprising a metallic underlayer, a ferroelectric data layer over said metallic underlayer, and a conducting layer over said ferroelectric layer having a charge migration rate faster than a charge migration rate of said ferroelectric data layer.

11. (Withdrawn) The memory apparatus of claim 10, further comprising:

a read/write head for accessing said ferroelectric storage medium.

12. (Withdrawn) The memory apparatus of claim 11, wherein said read/write head includes an electrometric sensor for reading information from said ferroelectric storage medium.

13. (Withdrawn) The memory apparatus of claim 12, wherein said electrometric sensor comprises:

an open-gate finFET.

14. (Withdrawn) The memory apparatus of claim 12, wherein said electrometric sensor comprises a plurality of electrometric sensing elements,

said plurality of electrometric sensing elements arranged linearly in at least one dimension.

15. (Withdrawn) The memory apparatus of claim 14, wherein said plurality of electrometric sensing elements are arranged in an x-axis dimension and in a y-axis dimension.

16. (Currently amended) A method of manufacturing a storage medium, said method comprising:

applying a layer of ferroelectric material over a metallic underlayer; and  
applying a layer of conducting material comprising silicon over said ferroelectric layer, a thickness of said conducting layer is within a range of approximately 5 Å to approximately 25 Å.

17-18. (Canceled)

19. (Original) The method of claim ~~18~~ 16, wherein a thickness of said conducting layer is approximately 15 Å.

20. (Original) The method of claim 16, wherein said metallic underlayer comprises  $\text{SrRuO}_3$ .